

Claim Rejections - 35 U.S.C. §103

The rejection of claims 4, 7, 9-12 under 35 U.S.C. 103 (a) over Grimberg et al., US 5,609,821 in view of Feasey et al., US 5,130,053 is respectfully traversed.

As acknowledged in the Office Action, Grimberg does not disclose concentration ranges of phosphonic acid in the range of 200 – 500 ppm.

Feasey does not rectify the deficiencies of Grimberg. Feasey merely discloses a composition of hydrogen peroxide and phosphonic acid in the range of 50 to 1000 ppm and also concentration ranges of 10 – 50 ppm (col. 4, line 48) and 1000 – 5000 ppm (col. 4, line 56). The obviousness rejection is predicated on the notion that it would have been obvious to one of ordinary skill to widen the Grimberg concentration range of phosphonic acid to a different concentration as taught by Feasey despite Grimberg's repeated teaching not to increase the concentration of stabilizer. However, no explanation or other rational basis is given as to how a skilled person would arrive at the presently claimed range of 200 – 500 ppm based on the disclosure in Feasey of a range of 50 - 1000 ppm and other broader ranges. Feasey does not disclose the narrower, presently claimed, range of 200 – 500 ppm.

Thus, a key point is whether the broad ranges disclosed in Feasey teach the ordinarily skilled person to use a concentration range presently claimed. On this point there is very relevant precedent set forth in *Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006) and the corresponding guidance in the MPEP 2131.03 II referenced in applicant's arguments filed September 12, 2008. Although the Final Office Action summarily states that applicant's arguments filed on September 12, 2008 were considered, it is notable that the Final Office Action does not comment on or rebut Applicants' arguments regarding the clear precedent set by this case, which is directly in point. Therefore, Applicants respectfully request a full consideration of the legal principles of patentability set forth in the cited case and their application to the facts of the present application.

Pointedly, M.P.E.P. §2131.03 II specifically notes that to disclose a feature the prior art range must disclose the claimed range with "sufficient specificity". As mentioned therein, in *Atofina v. Great Lakes Chem. Corp, supra*, the court held that a reference temperature range of 100-500 °C did not describe the claimed range of 330-450 °C with sufficient specificity to be anticipatory even though there was disclosure of a more preferred range which also overlapped with the claimed range. In the present application, Feasey discloses that the stabilizer can be in the range of anywhere from 10 ppm to 5000 ppm (col. 4 line 47 – 56) and for certain applications a range of from 50 – 1000 ppm (col.4 line 51), but even the specific example to which the Examiner refers (col. 7, example 5) does not specify the stabilizer content further.

Feasey does not disclose which concentration range is appropriate for foodstuff-compatible phosphoric acids as presently claimed and so it is submitted there is no teaching to the skilled person which range to choose. However even if the skilled person chose the disclosed range closest to that presently claimed and to which the Examiner refers (i.e., a disclosed range of 50 – 1000 ppm) the pro-rata magnitude of the specificity is almost exactly the same as the precedent established in *Atofina v. Great Lakes Chem. Corp supra*. In the *Atofina* case, a claim covering 30% of the disclosed range was held to be novel over the disclosure¹. In the present case the claimed range covers 31.6%² of one of the disclosed ranges. This is almost exactly the same percentage as the precedent established in *Atofina*. Moreover these percentage figures do not take into account the teaching in Feasey which is even less specific as it also teaches to use ranges of 10 – 50 ppm and 1000 – 5000 ppm, nor do these percentages take into account the teaching in the prior art reference of the *Atofina* case which had a preferred range closer to the claimed range but was nonetheless held not to be anticipatory.

¹ In the *Atofina* case, the claimed invention covered 330 to 450 °C ie a range of 120 whereas the disclosure covered 100 to 500 °C ie a range 400; 120/400 is 30%.

² In the present invention, the claimed invention covers 200 – 500 ppm ie a range of 300 whereas one range in the disclosure covers is 50 – 1000 ppm ie a range of 950; 300/950 is 31.6%.

Therefore applying this precedent to the present application, it is respectfully submitted that Feasey does not disclose the range of 200 – 500 ppm with sufficient specificity even though one range disclosed is 50 – 1000 ppm and even though this includes the sub-range now claimed. Therefore, even assuming *arguendo* that the combination of the two cited references were, the combination of the two references does not disclose or suggest a hydrogen peroxide having phosphonic acid within the presently claimed range.

Applicant also respectfully disagrees that the combination is obvious for the reasons given in earlier submissions. To support this position, submitted herewith is a Declaration under 37 C.F.R. §1.132, signed by both inventors of the present application, evidencing that the results obtained using the claimed method of the invention were unexpected and were indeed surprising. See attached Declaration.

Thus as the feature of the concentration of the phosphonic acid (as per claims 4, 11) is not disclosed in Feasey, and since the presently claimed method is evidenced herein as producing unexpected results, the Office is respectfully requested to withdraw the rejections of claims 4 and 11 and their dependent claims 7-10, 12 - 13 which are believed to be non-obvious and therefore allowable.

Likewise, the rejection of claims 8 and 13 under 35 U.S.C. 103(a) over Grimberg et al., US 5,609,821 in view of Feasey et al., US 5,130,053 and further in view of Vogele et al., US 4,104,024 is respectfully traversed.

As also evidenced by the inventors in the attached Declaration, the stability of hydrogen peroxide is known to be reduced at increased temperatures. Thus the stability of hydrogen peroxide at increased temperatures, as detailed in the application as filed, is particularly surprising and particularly unexpected. Whilst Vogele discloses a temperature up to 90 °C, the combination of the features set forth in claims 8 and 13 produce an unexpected result. Thus the features of claim 8 and 13 are regarded as particularly inventive.

In view of the foregoing remarks and the Declaration evidence of record, all of claims 4, 7-13 are respectfully submitted to be non-obvious and therefore


allowable. Reconsideration of the examiner's objections and rejections, and an early notice of allowance of all pending claims is respectfully solicited.

If there are any questions regarding this Reply or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the examination of the application.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #101771.53337US).

Respectfully submitted,

February 18, 2009



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